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10/783,518	02/20/2004	Robert Roth	112855.124 (US2)	7157
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WILMERHALE/BOSTON 60 STATE STREET BOSTON, MA 02109			EXAMINER GODBOLD, DOUGLAS	
			ART UNIT 2626	PAPER NUMBER
			NOTIFICATION DATE 11/28/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/783,518	Applicant(s) ROTH ET AL.	
	Examiner DOUGLAS C. GODBOLD	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-14, 20-25 and 33 is/are allowed.
- 6) ☒ Claim(s) 15, 16, 18, 26 and 28-32 is/are rejected.
- 7) ☐ Claim(s) 17, 19, 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office Action is in response to correspondence filed May 5, 2008 in reference to application 10/783,518. Claims 1-33 are pending and have been examined.
2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Response to Arguments

3. Applicant's arguments, see Pre-Brief Conference request, filed May 5, 2008, with respect to claims 1-14, 17, 21-25 and 33 have been fully considered and are persuasive. The rejections of 1-14, 17, 21-25 and 33 have been withdrawn.
4. Applicant's arguments with respect to claims 15-16, 18, and 26, 2832 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 15, 16, 26, and 28-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Stevens et al. (US Patent 6,912,498).

7. Consider claim 15, Stevens teaches a method of constructing a list of alternate transcripts from a recognized transcript (abstract), comprising:

performing speech recognition on a spoken transcripts to generate a best scoring hypothesis (user may dictate into speech recognition software; column 15 lines 58-65), wherein performing speech recognition involves at each of a plurality of different times throughout the transcript generating two partial hypotheses each seeding a common word (lists of alternative transcripts 1915 of figure 13, that is generated during speech recognition; column 17 lines 34-55), said two partial hypotheses including a primary hypothesis having a first score and corresponding to a primary partial history (original best scoring transcripts; column 17 line 41.) and a competing hypothesis having a second score and corresponding to a competing partial history (remaining transcripts; column 17 line 44.);

at each of the plurality of different times, storing a close call record, wherein said close call record includes the primary partial history, the competing partial history, and a measure of how close the two competing hypotheses are (alternative transcript in record 1915 has one or more words indexed by time, and also scores. The scores would inherently indicate how close they are to each other; Column 17 lines 34-55.);
and

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after performing speech recognition, using the stored close call records to generate a choice list of alternative versions of the best scoring hypothesis (choice list is generated based on stored transcript records; column 17 line 14- column 18 line 26.).

8. Consider claim 16, Stevens teaches a method of constructing a list of alternate transcript from a recognized utterance (abstract), comprising

generating a list of close call records (lists of alternative transcripts 1915 of figure 13, that is generated during speech recognition; column 17 lines 34-55), wherein each record includes history information and scoring information associated with a particular pair of partial hypotheses seeding a common word (original best scoring transcripts, and other transcripts at same time in alternative transcript in record 1915, which has one or more words indexed by time, and also scores. The scores would inherently indicate how close they are to each other; Column 17 lines 34-55);

generating one or more alternate transcripts from the list of close call records by evaluating each record in the list for a match between a partial sub-history of the recognized utterance and one of the histories stored in the record, and upon finding such a match (user selects word that needs to be corrected, and then searches is list of transcripts 1915 for the correct character position; column 17 lines 14-34), substituting the other of the histories stored in the record for the partial sub-history in the recognized transcript; and, storing the one or more alternate transcripts in a choice list (alternative from list 1915 is chosen, and produces a replacement result; column 17 line 34 - column 18 line 20).

9. Consider claim 26, Stevens teaches a method of creating an alternate utterance hypothesis from a complete utterance hypothesis (abstract), comprising:

for a first partial hypothesis having an associated first score (original best scoring transcripts; column 17 line 41.) and a second partial hypothesis having an associated second score being less than the first score (remaining transcripts; column 17 line 44), both ending at a common time and both seeding a common continuation word (original best scoring transcripts, and other transcripts at same time in alternative transcript in record 1915, which has one or more words indexed by time; Column 17 lines 34-55. column 17 lines 55-67 discusses finding a common end with original transcription), storing information characterizing the first partial hypothesis and the second partial hypothesis at each frame following the seeding of the common continuation word, the information including at least a history of the first partial hypothesis and a history of the second partial hypothesis (lists of alternative transcripts 1915 of figure 13, that is generated during speech recognition and is indexed by word and time information; column 17 lines 34-55);

comparing a set of first words from the first hypothesis and a set of first words from the complete utterance hypothesis (user selects word that needs to be corrected, and then searches is list of transcripts 1915 for the correct character position; column 17 lines 14-34); and,

if a set of first words from the history of the first partial hypothesis matches a set of first words from the complete utterance hypothesis (user selects word that needs to

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be corrected, and then searches is list of transcripts 1915 for the correct character position; column 17 lines 14-34), substituting the history of the second partial hypothesis for the history of the first partial hypothesis within the complete utterance hypothesis (alternative from list 1915 is chosen, and produces a replacement result; column 17 line 34 - column 18 line 20).

10. Consider claim 28, Stevens teaches a method according to claim 26, further including generating the first score and the second score based at least upon input acoustic data and a set of language models (column 1 lines 33-57 where basic speech recognition is discussed using models on acoustic data. transcript list 1915 is generated during recognition, so scoring data must be generated during recognition; column 17 lines 14-34).

11. Consider claim 29, Stevens teaches a method according to claim 26, further including comparing the set of first words of the history of the first partial hypothesis to the set of words from the complete utterance hypothesis, wherein the set of words from the complete utterance hypothesis includes all of the words from the first partial hypothesis (user selects word that needs to be corrected, and then searches is list of transcripts 1915 for the correct character position; column 17 lines 14-34. as the user selects the words for correction [first partial hypothesis], it is inherent this will be contained in the complete utterance as originally transcribed).

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12. Consider claim 30, Stevens teaches A computer readable medium storing instructions adapted for execution on a processor (memory 145 in figure 1), said instructions comprising

instructions for generating a list of close call records (lists of alternative transcripts 1915 of figure 13, that is generated during speech recognition; column 17 lines 34-55), wherein each record includes history information and scoring information associated with a particular pair of partial hypotheses seeding a common word (original best scoring transcripts, and other transcripts at same time in alternative transcript in record 1915, which has one or more words indexed by time, and also scores. The scores would inherently indicate how close they are to each other; Column 17 lines 34-55);

instructions for generating one or more alternate transcripts from the list of close call records by evaluating each record in the list for a match between a partial sub-history of the recognized utterance and one of the histories stored in the record, and upon finding such a match (user selects word that needs to be corrected, and then searches is list of transcripts 1915 for the correct character position; column 17 lines 14-34), substituting the other of the histories stored in the record for the partial sub-history in the recognized transcript; and, storing the one or more alternate transcripts in a choice list (alternative from list 1915 is chosen, and produces a replacement result; column 17 line 34 - column 18 line 20).

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13. Consider claim 31, Stevens teaches the computer readable medium of claim 30, wherein the medium is disposed within a mobile telephone apparatus and operates in conjunction with a user interface (figure 8, shows using the correction system in conjunction with a cellular phone, further, column 2 line 25 discusses use on handheld devices.).

14. Consider claim 32, Stevens teaches the computer readable medium of claim 30, wherein the medium is disposed within a handheld electronic apparatus and operates in conjunction with a user interface (figure 8, shows using the correction system in conjunction with a cellular phone, further, column 2 line 25 discusses use on handheld devices.).

Claim Rejections - 35 USC § 103

15. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

16. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stevens as applied to claim 16 above, and further in view of Olsen et al (US Patent 6,754,625).

17. Consider claim 18, Steven teaches a method according to claim 16, but does not specifically teach further including limiting the list of close call records to a preset maximum number of records.

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In the same field of determining alternative words, Olsen teaches limiting the list of close call records to a preset maximum number of close call records (Figure 4, step 416, restrict number of words added to list based on maximum number of words in list.).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the limits of Olsen with the speech recognition of Stevens in order to provide a method of preventing overflow of limited memory resources.

Allowable Subject Matter

18. Claims 1-14, 20-25, and 33 are allowed.

19. Claims 17, 19, and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

20. The following is an examiner's statement of reasons for allowance:

21. Consider claim 1, The prior art of record, specifically Stevens, teaches during speech recognition, generating a list of close call records, wherein each record includes histories for each of two competing partial hypotheses (see column 17 line 34 - column 18 line 20, records 1915 which are generated during recognition); but does not teach or fairly suggest

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initializing the choice list from at least one output of the speech recognition system; and

that steps (a) through (c) are completed on records selected from the choice list. As seen in the rejection of claim 26 above, Stevens suggests using the original transcript that is not specifically associated with a choice list to complete steps (a) through (c) (see column 17 line 34 - column 18 line 20). Therefore claim 1 is allowable over the prior art of record.

22. Claims 2-14 are allowed as they are dependent on and further limit allowable claim 1.

23. Claims 13 requires similar allowable limitations as claim 1, and is therefore allowed for the same reason listed above.

24. Claim 14 is allowed as it is dependent on and further limits allowable claim 13.

25. Consider claim 17, The prior art of record, specifically Stevens, does not fairly teach or suggest evaluating each record in the list of close call records for a match between a partial sub-history of each alternate utterance in the choice list and one of the histories stored in the record, although Stevens does suggest evaluating for a match between records in the close call records and original transcriptions (see column 17 line

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34 - column 18 line 20, and rejection of claim 26). Therefore claim 17 is allowable over the prior art or record.

26. Consider claim 19, The prior art of record, Stevens teaches a method according to claim 16, further including storing in the close call list for each pair of partial hypotheses seeding a common word (i) a history of a first partial hypothesis, (ii) a history of a second partial hypothesis (original best scoring transcripts, and other transcripts at same time in alternative transcript in record 1915, which has one or more words indexed by time, and also scores. The scores would inherently indicate how close they are to each other; Column 17 lines 34-55), The prior art of record, Stevens or Chen in view of Baker does not fairly suggest (iii) a score difference being a difference between a score of the first partial hypothesis and a score of the second partial hypothesis, and (iv) a global score nor can the prior art of record be combined to fairly duplicate these limitations. Therefore claim 19 is allowable subject matter when combined with the limitations of claim 16.

27. Claim 20 requires similar allowable limitations as claim 19, and is therefore allowed for the same reasons listed above.

28. Consider claim 21, The prior art of record, Stevens teaches a method according to claim 16, further including storing in the close call list for each pair of partial hypotheses seeding a common word (i) a history of a first partial hypothesis, (ii) a

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history of a second partial hypothesis (original best scoring transcripts, and other transcripts at same time in alternative transcript in record 1915, which has one or more words indexed by time, and also scores. The scores would inherently indicate how close they are to each other; Column 17 lines 34-55), The prior art of record, Stevens or Chen in view of Baker does not fairly suggest (iii) a score difference being a difference between a score of the first partial hypothesis and a score of the second partial hypothesis, and (iv) a global score nor can the prior art of record be combined to fairly duplicate these limitations.

Stevens further does not teach or fairly suggest

initializing the choice list from at least one output of the speech recognition system; and

that steps (i) through (iii) are completed on records selected from the choice list.

As seen in the rejection of claim 26 above, Stevens suggests using the original transcript that is not specifically associated with a choice list to complete steps (i) through (iii) (see column 17 line 34 - column 18 line 20). Therefore claim 21 is allowable over the prior art of record.

29. Claims 22-25 are allowed as they are dependent on and further limit allowable claim 21.

30. Claim 27 requires similar allowable limitations as claim 19, and is therefore allowed for the same reasons listed above.

31. Claims 33 requires similar allowable limitations as claim 1, and is therefore allowed for the same reason listed above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOUGLAS C. GODBOLD whose telephone number is (571)270-1451. The examiner can normally be reached on Monday-Thursday 7:00am-4:30pm Friday 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DCG

/Patrick N. Edouard/
Supervisory Patent Examiner, Art Unit 2626